

What is Claimed Is:

1. A basket assembly fixture useful in the construction of a basket assembly for interring spent nuclear fuel rods, the basket assembly fixture comprising:

5 (a) an elongate base having a first end, an opposed second end and a longitudinal axis;

(b) a pair of lifting beams disposed above the base and generally parallel to the longitudinal axis of the base, each lifting beam having a first end and an opposed second end;

10 (c) lifting beam raising means for alternatively raising and lowering both ends of each lifting beam;

(d) lifting beam lateral shifting means for laterally shifting both ends of each lifting beam;

15 (e) a transverse beam disposed generally horizontally above the frame, the transverse beam also being disposed below and generally perpendicular to the two lifting beams, the transverse beam having a first end and an opposed second end; and

(f) transverse beam raising means for alternatively raising and lowering both ends of the transverse beam.

20 2. The basket assembly fixture of claim 1 further comprising alignment measuring means for aligning the horizontal and vertical disposition of both of the pair of lifting beams.

25 3. The basket assembly fixture of claim 2 wherein the alignment measuring means comprises a pair of tight wire assemblies, each tight wire assembly comprising (i) a length of wire disposed above the base and generally parallel to the longitudinal axis of the base and (ii) tightening means for drawing the length of wire taut.

4. The basket assembly fixture of claim 3 wherein the tightening means comprises at least one weight disposed at the end of the length of wire.

5 5. The basket assembly fixture of claim 1 wherein the lifting beam raising means, the lifting beam lateral shifting means and the transverse beam raising means are hydraulic jacks.

10 6. The basket assembly fixture of claim 1 further comprising a plurality of basket assembly support disks supported on the frame and disposed in vertical planes and in parallel with one another, each basket assembly support disk comprising at least two support beam apertures therethrough, each of the two lifting beams being disposed through support beam apertures.

15 7. The basket assembly fixture of claim 6 wherein the plurality of basket assembly support disks are fastened to one another by a plurality of generally parallel support rods.

20 8. A method of preparing a basket assembly for interring spent nuclear fuel rods, the basket assembly comprising a plurality of support disks disposed parallel to one another and spaced apart from one another, the support disks all having at least two lifting beam apertures disposed therethrough, the method comprising the steps of:

(a) disposing a plurality of basket assembly support disks on a basket assembly fixture comprising:

25 (i) an elongate base having a first end, an opposed second end and a longitudinal axis;

(ii) a pair of lifting beams disposed above the base and generally parallel to the longitudinal axis of the base, each lifting beam having a first end and an opposed second end;

(iii) lifting beam raising means for alternatively raising and lowering both ends of each lifting beam;

(iv) lifting beam lateral shifting means for laterally shifting both ends of each lifting beam;

5 (v) a transverse beam disposed generally horizontally above the frame, the transverse beam also being disposed below and generally perpendicular to the two lifting beams, the transverse beam having a first end and an opposed second end; and

(vi) transverse beam raising means for alternatively raising and lowering both ends of the transverse beam;

10 the plurality of basket assembly support disks being disposed in vertical planes within the frame of the basket assembly fixture with each of the pair of lifting beams being disposed generally horizontally through one of the lifting beam apertures in each of the support disks;

(b) lifting the plurality of support disks away from the frame of the
15 basket assembly fixture by raising the lifting beams using the lifting beam raising means;

(c) vertically aligning the plurality of support disks using vertical alignment measuring means, the lifting beam raising means and the transverse beam raising means;

(d) laterally aligning the plurality of support disks using lateral
20 alignment measuring means and the lifting beam shifting means;

(e) thereafter rigidly attaching the plurality of support disks to one another to form the basket assembly; and

(f) thereafter removing the pair of lifting beams from the basket assembly and removing the basket assembly from the basket assembly fixture.

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9. The method of claim 8 wherein the vertical alignment measuring means and the lateral alignment measuring means are provided by a pair of tight wire assemblies, each tire wire assembly comprising (i) a length of wire disposed above the base and generally parallel

to the longitudinal axis of the base, and (ii) tightening means for drawing the length of wire taut.

10. The method of claim 9 wherein the tightening means comprises at least one weight disposed at the end of the length of wire.

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11. The method of claim 8 wherein the plurality of basket assembly support disks are fastened to one another by a plurality of generally parallel support rods.

10 12. The method of claim 8 wherein the plurality of basket assembly support disks are fastened to one another by a plurality of parallel support rods and are spaced apart from one another by spacer sleeves disposed on the support rods.

15 13. The basket assembly fixture of claim 8 wherein the lifting beam raising means, the lifting beam lateral shifting means and the transverse beam raising means are hydraulic jacks.